

SOME NEW CICADELLIDÆ (HOMOPTERA) FROM THE SOUTHERN UNITED STATES.

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During the spring of 1921 several interesting species of "Jasids" were collected in the Florida everglades, many of which had not been previously described. This paper is the third one pertaining chiefly to these new forms, the previous articles were published in the Proceedings of the Biological Society of Washington during the past year (Sanders and DeLong).

Idiocerus taxodium new species.

Resembling *nervatus* in general appearance and coloration but smaller and more robust, dark green with a bright iridescent tinge. Length, 3.5 to 4 mm.

Male antennal discs black, elongated, constricted basally and apically, and bearing a flagellum at apex which is almost twice as long as disc.

Color: Vertex, pronotum and scutellum dark green, basal angles of latter usually with a yellowish spot. Eyes bright red even in preserved material. Elytra subhyaline, with a bright bronze iridescent tinge, often smoky at tip, green of abdomen showing through. Sutural veins green. Face washed with yellow, venter green.

Genitalia: Female last ventral segment slightly roundly produced. Male valve with a roundly produced tooth at middle.

Described from a series of twenty-seven specimens collected at Paradise Key, Florida, April 5 and 10, 1921, by Mr. J. N. Knoll and the author. All of these were swept from bald cypress, *Toxodium disticum*, trees and shrubs in the small hammocks of the everglades.

Deltocephalus eburneus new species.

In general appearance and coloration resembling a *Scaphoideus* of the *sanctus* group but apparently most closely related to *D. simplex* and *osborni*. Length 4.5 mm.

Vertex very bluntly angled, almost one-fourth wider between eyes than length at middle, disc flat, rather sharply angled with front. Pronotum almost twice as broad as long, side margins very short. Scutellum large.

Elytra long. Clavus reticulate, central anteapical cell long, constricted and divided at center, enlarged posteriorly. Antennæ long.

COLOR: Face, clypeus and loræ heavily embrowned, with traces of pale arcs. Antennal pits black. Vertex white with four small spots above margin and a blotch on disc either side of middle pale orange. Pronotum with a median broad stripe and a narrowed one either side, brownish. Scutellum pale yellow, basal angles and apex darker. Elytra milky white, a large spot on middle of outer clavus dark brown, posterior claval cells washed with yellow. Inner anteapical cell, anterior and posterior portions of middle anteapical cell and outer apical cell pale to dark brown, this pattern forming a cross on the two elytra as in *Scaphoideus cruciatus*. Venter dark with yellow mottling, ovipositor black.

GENITALIA: Female last ventral segment almost three times as long as preceding. Posterior margin slightly narrower at base than preceding segment, lateral margins slightly rounding to prominent lateral angles, posterior margin shallowly concave.

Described from a single female specimen in excellent condition, collected at Corinth, Mississippi, July 8, 1921, and kindly sent to me by Dr. Carl J. Drake, the collector.

Lonatura bicolor melleus new variety.

Size and form of *bicolor* but with different coloration. Anterior margin of vertex black, a round spot at apex and ocelli yellowish. Disc yellow with five finger-like points projecting into the black area. One extending forward almost to apical spot, one either side in front of ocelli, and a second either side about midway along the eye. Pronotum, scutellum, elytra and abdomen yellow. Posterior margins of segments reddish, last dorsal segment black. Face beneath dark brown, paler below. Venter yellow to pale brown with darker markings.

This form occurs on the prairie grasses in company with typical *bicolor*. The color is almost entirely yellow instead of black as in that form.

Thamnotettix perspicillata rubralineus new variety.

Although this form is apparently only a variety of *perspicillata*, and the genital characters are practically the same, it is, nevertheless, slightly smaller in size and is more conspicuously colored. Length 3.4 mm.

It differs from *perspicillata* by having two rather broad bright red longitudinal bands which arise on the face just beneath the vertex and extend across vertex, pronotum and basal angles of scutellum. Also a short longitudinal band extends across the outer angles of the scutellum on either side. If the elytra and wings are removed these longitudinal stripes

are found to extend to the tip of the abdomen. This reddish color frequently shows through giving the elytra a red tinge. Three white circular spots are conspicuous on the clavus of each elytron along the commissural line.

Genitalia as in *perspicillata*.

The nymph was collected in abundance in the last three instars during April both at Miami, Florida, and La Belle, Florida. The nymphs are yellow in color with bright red eyes and a red band extends across the margin of vertex between them. It is slightly interrupted at the middle and terminates in a large black spot either side of apex. A pair of red longitudinal stripes fuse in this black spot either side and extend to the tip of abdomen. Also a pair extending across eyes or arising just behind them extends across pronotum and wing pads, when present, and along lateral margin of the abdomen either side, merging with the central pair at the tip of the abdomen.

The strikingly colored nymphs would seem to indicate a distinct species, but because of the similarity of the adults it is cited as a variety only.

Described from nine adults and a large number of nymphs. Collected at Miami, La Belle, Cleveland, and Orlando, Florida, during April, 1921, by the author.

***Thamnotettix planus* new species.**

Resembling *T. fitchii* in form and coloration but with genital characters very similar to *aureovittatus*. Length 3-3.5 mm.

Vertex blunt anteriorly, a little wider between eyes than length at middle. Pronotum twice as wide as long, strongly convex anteriorly. Elytra rather long, much longer than abdomen.

Color: Somewhat variable, straw to buff, face unmarked, ocelli pale red. Vertex with four small black spots about equidistant from each other in a row just above margin between ocelli. Pronotum in some specimens with a faint suggestion of longitudinal stripes. Elytra with venation pale and conspicuous. Beneath buff.

Genitalia: Female last ventral segment one-half longer than preceding. Lateral margins short, gradually produced to form a conspicuous rounded lobe either side of broad sunken truncated or slightly produced portion which is heavily embrowned and occupies the median third of the segment. Portions of underlying membrane rather large, conspicuous and produced beyond the posterior margin at either side. Male valve slightly produced, scarcely angled almost contained within the concavity of the last ventral segment. Plates short and broad, two-thirds as long as combined width at base. Convexly rounded from base to rather blunt tips. Pygofers much longer than plates, oedagus exceeding plates, bifurcate at apex.

Described from a series of specimens collected by the author at Miami, Florida, April 1 to 14, 1921, La Belle, Florida, April 20, 1921, and Sanibel Id., Florida, April 28, 1921, swept from grasses in dry upland areas. It does not occur in the sawgrass habitat and can easily be distinguished from *aureovittatus* by the different coloration, more flattened vertex, less tumid face and the more sharply angled front and vertex. Also the oedagus of the male genitalia is different.

Chlorotettix floridanus new species.

Resembling *galbanatus* in size and general appearance with vertex more rounded and genitalia different. Length 6 mm.

Vertex bluntly rounded, a little longer at middle than next the eyes and more than twice wider between eyes than length at middle. Pronotum more than twice as long as vertex. Elytra long, greatly exceeding abdomen.

Color bright green with a brownish iridescent tinge especially on elytra. Often washed with yellow.

Genitalia: Female last ventral segment twice as long as preceding, lateral margins roundly produced from half their length to form a broad rounding lobe either side of a broad median somewhat U-shaped notch extending two-thirds the distance to base. The sides of the notch convexly rounded almost to apex where an abrupt broad V-shaped notch is formed. Notch at base broadly embrowned. Male valve almost twice as long as preceding segment, more than twice wider than long, almost rounded at apex. Plates exceeding valve by more than twice its length, gradually sloping almost to apex where they are convexly rounded to form rather blunt appressed apices. Plates are longer and narrower than in *galbanatus*.

Described from four female specimens and one male all from Florida. Collected by the author. One female from Ft. Myers was collected April 22, 1921, and the other specimens were secured at Paradise Key, April 4 and 9, 1921.

Neocelidia tumidifrons vittapennis new variety.

Agreeing with typical *tumidifrons* in size and form but with elytra distinctly and conspicuously marked.

Pale to bright green, vertex and pronotum unmarked. Scutellum with the two round black spots in the basal angles. Elytra marked with brown vittæ which follow for the most part the wing venation. A stripe just inside the costal margin, a rather broad stripe along the commissural line and the veins of the wings brown, often broadly margined with brown. Sometimes the tips of the elytra are dark brown, smoky.

Described from a large series of specimens from Paradise Key, Ft. Myers, Orlando, La Belle and Miami, Florida. Collected during April, 1921. They live on short grasses in open pineland.

***Cicadula scriptus* new species.**

A very minute species resembling *sexnotata* in coloration but much smaller and with distinct markings. Length 2-2.5 mm.

Vertex arcuately produced, rather broadly rounded, about one and one-half times as wide between eyes as length at middle. Pronotum less than twice as long as vertex and twice wider than long. Elytra when folded causing insect to appear wedge shaped.

Color: Yellow washed with green, margin of vertex along eyes black, a band across vertex just above ocelli seldom broken, and a much broader one just below ocelli, sometimes interrupted at middle, black. A round black spot about the middle either side at base. Pronotum with a pair of approximate black spots near anterior margin and vermiculate markings anteriorly. A pair of approximate round spots at base of scutellum, basal angles and median impressed line black. Elytra smoky green, nervures pale. Sutures between face, clypeus and loræ, a longitudinal stripe across face and clypeus, broken arcs on face and outer margins of loræ dark brown. Beneath yellow, ovipositor black.

Genitalia: Female last ventral segment about as long as preceding, lateral angles slightly produced, posterior margin broadly, shallowly excavated. Ovipositor black. Male valve triangular, apex rounded. Plates exceeding valve by its length, broad at base, gradually tapered to narrowed upturned tips.

Described from a large series collected at Cleveland, Florida, April 25, 1921, by the author. Great numbers of both nymphs and adults were taken from *Eleocharis ochreatea* (Steud) which was growing in a low marshy area where a lagoon had formerly been.

***Dikraneura unipuncta dorsalis*, new variety.**

Agreeing with *unipuncta* in size and form but with different coloration

Disc of vertex and pronotum, scutellum and clavus of elytra covered with a broad longitudinal brownish band which is bordered by a white band extending along margins of vertex from apex, across margins of pronotum on to elytra at base and along claval suture half way to apex. Remainder of clavus brownish. Apical cross veins pale, fuscous margined, and black spot on apex as in *unipuncta*. Face yellowish.

This is a very common variety found in the everglades in company with *unipuncta* and is extremely abundant upon *Trima floridana* in everglade hammocks which are composed partially or entirely of this plant.

***Dikraneura marginatus* new species.**

In form and general appearance resembling *D. kunzei* but darker in color and with distinct genitalia. Length 2-2.5 mm.

Vertex produced, apex rounded, slightly wider between eyes than length at middle. Pronotum one-third longer than vertex, not twice as wide as long. Elytra with outer cell lanceolate. Venation differing from *kunzei*.

Color: Vertex dull yellow tinged with brown, median impressed line and a line just above margin and parallel with it, brownish. Margin below this line pale yellow with a narrow brownish line slightly below middle not extending to eyes. Face below brown, without traces of arcs. Pronotum with anterior third dull yellowish, disc and posterior portion sordid green. Scutellum dark green, apical third paler. Elytra sordid green tinged with yellow. Apical portion paler, venation yellowish. Tergum, black, venter dark brown marked with yellow.

Genitalia: Female last ventral segment longer than preceding, posterior margin gradually produced and somewhat convexly rounded. Male valve short, broadly rounded, almost contained within the concavity of last ventral segment. Plates three times as long as width at base, gradually narrowed from base and produced into long attenuated apices.

Described from one female and two male specimens collected at Miami, Florida, April 2 and 3, 1921.

***Empoa minutus* new species.**

A very minute species resembling a *Dikraneura* in general appearance, but with typical *Empoa* wing venation. Length 2 mm.

Vertex rounded, strongly produced, about one-fourth wider between eyes than length at middle. Pronotum one-fourth longer than vertex, not twice as wide as long. Elytra twice as long as abdomen in male. Outer veins of elytra united, then branching to form a triangular cell.

Color white to yellow, with a pair of longitudinal yellowish bands extending across vertex next eyes and across pronotum to scutellum. Basal half of elytra yellowish, claval vein and commissural suture white. Posterior half smoky, veins yellowish.

Genitalia: Male valve rather short and truncate or nearly so. Plates long, rather broad at base, gradually narrowed to rather blunt pointed apices.

Described from a single male specimen collected at Miami, Florida, April 13, 1921, by the author.

EXPLANATION OF PLATE VII.

1. *Doltocephalus eburneus* n. sp.; 1a—female genitalia.
2. *Chlorotettix floridanus* n. sp.; 2a female genitalia; 2b—male genitalia.
3. *Cicadula scriptus* n. sp.; 3a—female genitalia; 3b—male genitalia.
4. *Idiocerus taxodium* n. sp. (antennal disc).
5. *Thamnotettix planus* n. sp.; 5a—male genitalia; 5b—female genitalia.
6. *Dikraneura marginatus* n. sp.; 6a—female genitalia; 6b—male genitalia.
7. *Empoa minutus* n. sp.; 7a—male genitalia.